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## PATENT ABSTRACTS OF JAPAN

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(71)Applicant : A TO Z TECHNOL LTD

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(72)Inventor : DAVIDOVITZ ZVI  
RAMOT ISRAEL

(30)Priority

Priority number : 91 99717 Priority date : 11.10.1991 Priority country : IL

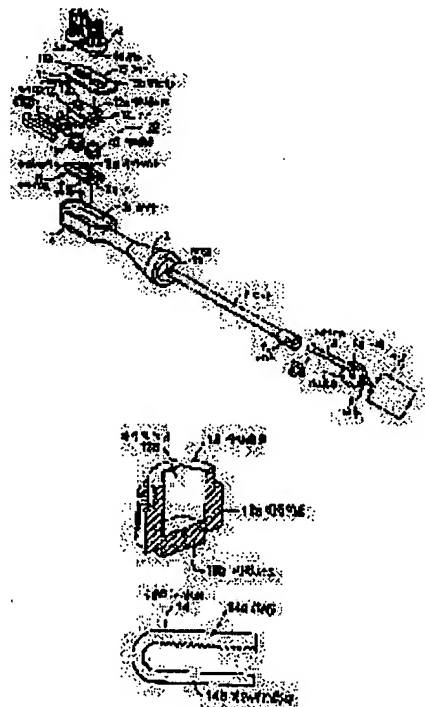
(54) TOOTH BRUSH

(57)Abstract:

PURPOSE: To strengthen removing dental calculi by providing a transmission assembly vibrating two bristle holders, each with a carrier assembly capable of reciprocating together with the bristle holders and by vibrating a connector between the bristle holders and the brush head.

CONSTITUTION: Energizing a motor 5 reciprocates the bristle holders in the recess 3a of the brush head 3 via a transmission between the motor 5 and the bristle holders 4. Likewise, reciprocating the carrier assembly vibrates two bristle holders 4 of the gears 13 engaged with the geared legs 14a of the U-shape rack members 14 fixed in the brush head recess 3a around each axial line.

Since these two bristle holders 4 are housed in a non-turning fashion inside the sockets 13c of the gears 13, respectively, they are clockwise turned during the forward stroke, while counterclockwise during the return stroke. The bristle holders 4 receive both the vibration and reciprocation motions likely as doing so to strengthen removing dental calculi.



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**LEGAL STATUS**

[Date of request for examination]

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[Date of final disposal for application]

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[Date of extinction of right]

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JAPANESE

[JP,06-189822,A]

CLAIMS DETAILED DESCRIPTION TECHNICAL  
FIELD TECHNICAL PROBLEM MEANS EXAMPLE  
DESCRIPTION OF DRAWINGS DRAWINGS

[Translation done.]

## \* NOTICES \*

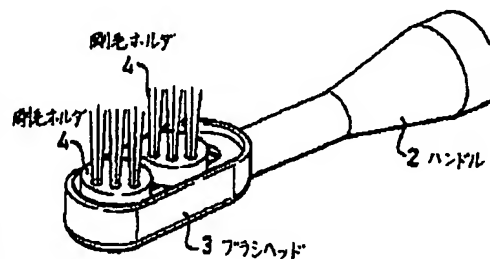
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## CLAIMS

## [Claim(s)]

[Claim 1] It is the gear-tooth brush which the aforementioned transfer assembly has this bristle electrode holder and the career-bureaucrats solid which can reciprocate together within this brush head by the aforementioned motor in the gear-tooth brush characterized by to provide the following while supporting the aforementioned bristle electrode holder, and is characterized by the coupling means between the aforementioned bristle electrode holder and the aforementioned brush head being effective in vibrating this bristle electrode holder in case the aforementioned bristle electrode holder reciprocates by the aforementioned motor. The handle with which the end was equipped. The brush head with which the other end was equipped. At least one bristle electrode holder constructed across possible [ vibration ] in this brush head. The transfer assembly which combines the motor and the aforementioned motor in the aforementioned handle with the aforementioned bristle electrode holder, and vibrates the aforementioned bristle electrode holder at the time of energization of the aforementioned motor.

Drawing selection ☐ drawing 1 ☒

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] It is the gear-tooth brush which the aforementioned transfer assembly has this bristle electrode holder and the career-bureaucrats solid which can reciprocate together within this brush head by the aforementioned motor in the gear-tooth brush characterized by to provide the following while supporting the aforementioned bristle electrode holder, and is characterized by the coupling means between the aforementioned bristle electrode holder and the aforementioned brush head being effective in vibrating this bristle electrode holder in case the aforementioned bristle electrode holder reciprocates by the aforementioned motor. The handle with which the end was equipped. The brush head with which the other end was equipped. At least one bristle electrode holder constructed across possible [ vibration ] in this brush head. The transfer assembly which combines the motor and the aforementioned motor in the aforementioned handle with the aforementioned bristle electrode holder, and vibrates the aforementioned bristle electrode holder at the time of energization of the aforementioned motor.

[Claim 2] The aforementioned career-bureaucrats solid is the gear-tooth brush of the claim 1 publication which can reciprocate in the direction which goes to the aforementioned handle, and the direction to leave.

[Claim 3] The aforementioned coupling means are the gear-tooth brushes of the claim 2 publication which has the circular gearing which meshes on the rack fixed to the aforementioned brush head while being combined with the aforementioned bristle electrode holder in nonrotation.

[Claim 4] The aforementioned circular gearing is the gear-tooth brush of the claim 3 publication which has held the circular stem arranged in the place of the end of that held in circular opening currently formed in the aforementioned career-bureaucrats solid, and the un-circular stem formed in the aforementioned bristle electrode holder and which has the un-circular socket of the place of the other end of that.

[Claim 5] The aforementioned career-bureaucrats solid is the gear-tooth brush of the claim 3 publication which has the secure-closing means for putting firmly on these wooden floors a way board, the method board of outside with which circular opening which holds completely the aforementioned un-circular stem of the aforementioned bristle electrode holder was formed, and the two aforementioned boards together with the aforementioned circular gearing while the aforementioned circular opening was formed.

[Claim 6] It is the gear-tooth brush of claim 5 publication with which the aforementioned secure-closing means has the cylinder-like socket with which one side of the aforementioned boards was equipped, and this cylinder-like socket has held the cylinder-like pin by which another side of the aforementioned board was arranged by snap action.

[Claim 7] It is the gear-tooth brush of the claim 3 publication which the aforementioned career-bureaucrats solid is supporting the aforementioned handle and at least two bristle electrode holders you were made to adjust, each bristle electrode holder has the circular gearing, and has geared on the rack fixed to the aforementioned brush head while this circular gearing is combined with the bristle electrode holder of that in nonrotation.

[Claim 8] two U typefaces with the leg by which the aforementioned rack was fixed in the aforementioned brush head -- the gear-tooth brush of the claim 7 publication which is a part of member [Claim 9] the aforementioned U typeface -- the gear-tooth brush of the claim 8 publication which has geared with the circular gearing of both aforementioned bristle electrode holders to one side of the legs of a member and by which dentation formation is carried out  
[Claim 10] the aforementioned U typeface -- the gear-tooth brush of claim 9 publication with which dentation formation is carried out at a part of each two legs of a member, and the one section each has geared with one circular gearing of the aforementioned bristle electrode holder

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## JP6189822A2: TOOTH BRUSH

JP Japan

A

DAVIDOVITZ ZVI  
RAMOT ISRAEL

No Image

Applicant/Assignee

A TO Z TECHNOL LTD

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Issue/Filed Dates

July 12, 1994 / Oct. 12, 1992

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Priority Number(s)

Oct. 11, 1991 IL1991000099717

Abstract

**Purpose:** To strengthen removing dental calculi by providing a transmission assembly vibrating two bristle holders, each with a carrier assembly capable of reciprocating together with the bristle holders and by vibrating a connector between the bristle holders and the brush head.

**Constitution:** Energizing a motor 5 reciprocates the bristle holders in the recess 3a of the brush head 3 via a transmission between the motor 5 and the bristle holders 4. Likewise, reciprocating the carrier assembly vibrates two bristle holders 4 of the gears 13 engaged with the geared legs 14a of the U-shape rack members 14 fixed in the brush head recess 3a around each axial line. Since these two bristle holders 4 are housed in a non-turning fashion inside the sockets 13c of the gears 13, respectively, they are clockwise turned during the forward stroke, while counterclockwise during the return stroke. The bristle holders 4 receive both the vibration and reciprocation motions likely as doing so to strengthen removing dental calculi.

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[図1]

